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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,379	12/04/2003	Harry Contopanagos	BP2110DIV	6971

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EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/727,379

Applicant(s)

CONTOPANAGOS ET AL.

Examiner

A. Dexter Tugbang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Species A, Claims 1 through 7 in the reply filed on September 5, 2006 is acknowledged. The traversal is on the ground(s) that since at least one novel aspect of one species is present in the other species, the restriction should be withdrawn. This is not found persuasive because while there may be at least one aspect that is common to each species, it is the different aspects and/or features in each species that would require non-coextensive searches, different art, and different lines of patentability. Taking these factors into consideration would place a burden on the examiner to search and examine all of the species.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 8 through 15 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on September 5, 2006.

### ***Priority***

3. While the applicant(s) do correctly reference parent application serial no. 10/074,158 on page 1 of the specification, this reference should also include the current status, e.g. that it has matured into U.S. Patent 6,937,128.

### ***Specification***

4. Applicant is reminded of the proper content of an abstract of the disclosure.

Art Unit: 3729

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.**

Extensive mechanical and design details of apparatus should not be given.

5. The abstract of the disclosure is objected to because the content does not appear to be directed the claimed invention, i.e. process of making (or at least the process steps of Claim 1).

Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujiki 5,497,137.

Art Unit: 3729

Fujiki discloses a method (in Fig. 8) for making an on-chip inductor comprising: creating a dielectric layer (e.g. 14c); and creating a conductive winding (e.g. 22) on the dielectric layer, wherein the winding has a substantially square geometry.

Regarding Claim(s) 4 and 6, Fujiki teaches that the geometry of the winding is spiraled such that exterior corners are angled exterior corners. The winding of Fujiki inherently reduces impedance of the on-chip inductor at an operating frequency and inherently reduces current turbulence in the corner at the operating frequency to the extent that the shape of the exterior corners and interior corners of the applicant(s) have the exact same shape of the exterior corners and interior corners of Fujiki, by comparison.

Regarding Claim(s) 5, Fujiki further teaches that within the step of creating the conductive winding, creating a first winding (e.g. 22) on a first layer (e.g. 14c), creating a second winding (e.g. 28) on a second layer (e.g. 14d), and connecting the first winding to the second winding with at least one bridge (e.g. 34a, 34b, 34c or 34d).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2, 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiki in view of Apel et al 6,407,647.

Art Unit: 3729

Fujiki discloses the claimed manufacturing method as relied upon above in Claim 1, further including that the winding includes shaping of the corners such that an interior angle per corner is approximately 90 degrees. Also, the exterior corner angle of Fujiki appears to be approximately 135 degrees.

Regarding Claim(s) 2, Fujiki does not appear to mention the exact angles in degrees.

Regarding Claim(s) 3 and 7, Fujiki does not appear to mention or show that the interior corner angle is 135 degrees, or that the interior corners are angled.

Apel shows that a winding can include an interior angle of approximately 135 degrees and an exterior angle of approximately 135 degrees, for the same purpose of operation in a transformer.

Regarding Claim(s) 7, since the interior corner is angled in Apel, this would inherently reduce current turbulence in the corner at the operating frequency.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the winding geometry shape of Fujiki by including interior and exterior cornered angles, as taught by Apel, to provide the very same function of operating a transformer.

In the event that the applicant(s) believe that neither Fujiki or Apel actually state what angles are specified at the interior corner or the exterior corner of the winding, the specific angles of the interior corner or the exterior corner are each considered to be an effective variable within the level of ordinary skill in the art of manufacturing windings in inductors or transformers. It is noted that the angles at the corners of the windings of Fujiki and Apel are the very same in shape by visual inspection when compared to the applicant(s) winding. Therefore,

Art Unit: 3729

it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a specific angle of 135 degrees for the interior corner and 135 degrees for the exterior corner, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

October 2, 2006